



group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more  $-CH_2-$  groups are each optionally replaced by  $-O-$ ,  $-S-$ ,  $-NR^6-$ ,  $-SO_2NH-$ ,  $-NH SO_2-$ ,  $-SO_2NR^6-$ ,  $-NR^6SO_2-$ ,  $-CO-$ ,  $-NR^6CO-$ ,  $-CONR^6-$ ,  $-NHCONH-$ ,  $-OCONH-$ ,  $-NHCOO-$ ,  $-SCONH-$ ,  $-SCSNH-$ , or  $-NHCSNH-$ ; and

$R^6$  is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen,  $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl,  $CF_3O$ , nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein R<sup>3</sup> and R<sup>4</sup> are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

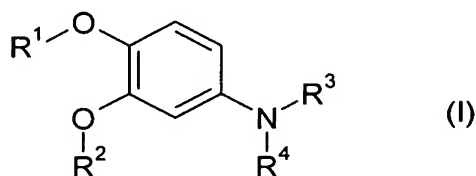
12. (Withdrawn): A method according to claim 11, wherein said patient is a human.

13. (Withdrawn): A method according to claim 12, wherein said patient is suffering from memory impairment.

14. (Withdrawn): A method according to claim 11, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

15. (Withdrawn): A method according to claim 13, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeld-Jakob disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

16. (Withdrawn – Currently Amended): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to formula (I):



wherein

R<sup>1</sup> is H;

R<sup>2</sup> is alkyl having 1 to 12 carbon atoms which is branched or unbranched and which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano, C<sub>1-4</sub>-alkoxy, oxo or combinations thereof, and wherein

optionally one or more  $\text{-CH}_2\text{CH}_2\text{-}$  groups is replaced in each case by  $\text{-CH=CH-}$  or  $\text{-}\underline{\text{C}\equiv\text{C}}\text{-}$   $\text{-C/C-}$ ,

cycloalkyl having 3 to 10 carbon atoms which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy,  $\text{C}_{1-4}$ -alkyl,  $\text{C}_{1-4}$ -alkoxy or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen,  $\text{CF}_3$ ,  $\text{OCF}_3$ , alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, cyano, or combinations thereof,

arylalkyl in which the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, which the arylalkyl radical is unsubstituted or is substituted in the aryl portion one or more times by halogen,  $\text{CF}_3$ ,  $\text{OCF}_3$ , alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, cyano, methylenedioxy, ethylenedioxy, or combinations thereof, and wherein in the alkyl portion one or more  $\text{-CH}_2\text{CH}_2\text{-}$  groups are each optionally

replaced by -CH=CH- or -C/C-, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof,

a partially unsaturated carbocyclic group having 5 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, hydroxy, nitro, cyano, oxo, or combinations thereof,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, OCF<sub>3</sub>, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>-

groups are each optionally replaced by -CH=CH- or -C/C-, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof;

R<sup>3</sup> is H,

alkyl having 1 to 8 carbon atoms, which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, cyano, C<sub>1-4</sub>-alkoxy, or combinations thereof,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion which is branched or unbranched has 1 to 5 carbon atoms, and which is unsubstituted or substituted in the carbocyclic portion one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof, and the alkyl portion is optionally substituted by halogen, C<sub>1-4</sub>-alkoxy, cyano or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino wherein the alkyl group has 1 to 12 carbon atoms,

dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl, or

heteroarylalkyl group, wherein the heteroaryl portion may be partially or fully saturated and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, the heteroarylalkyl group is unsubstituted or substituted one or more times in the heteroaryl portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

R<sup>4</sup> is H,

cycloalkyl having 3 to 10 which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkenyl having 2 to 12 carbon atoms, alkynyl having 2 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy,

ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, pyrrolyl, tetrazole-5-yl, 2(-heterocycle)tetrazole-5-yl ~~tetrazole-5-yl~~, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having



1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof;

R<sup>5</sup> is H,

alkyl having 1 to 8 carbon atoms, which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof,

alkylamino or dialkylamino wherein each alkyl portion has independently 1 to 8 carbon atoms,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion has 1 to 5 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof,

cycloalkyl having 3 to 10 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkoxy having 1 to 12 carbon atoms, alkyl having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms, which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more

times by halogen, oxo, cyano, hydroxy, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, cycloalkyl having 3 to 10 carbon atoms, aryl having 6 to 14 carbon atoms which is substituted unsubstituted, heteroaryl having one or two rings and a total number of 5 to 10 ring atoms wherein at least one of the ring atoms is a heteroatom and which is substituted unsubstituted, or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the

aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at

least 1 ring atom is a N, O or S atom, and the alkyl portion which is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more -CH<sub>2</sub>- groups are each optionally replaced by -O-, -S-, -NR<sup>6</sup>-, -SO<sub>2</sub>NH-, -NHSO<sub>2</sub>-, -SO<sub>2</sub>NR<sup>6</sup>-, -NR<sup>6</sup>SO<sub>2</sub>-, -CO-, -NR<sup>6</sup>CO-, -CONR<sup>6</sup>-, -NHCONH-, -OCONH-, -NHCOO-, -SCONH-, -SCSNH-, or -NHCSNH-; and

R<sup>6</sup> is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro,

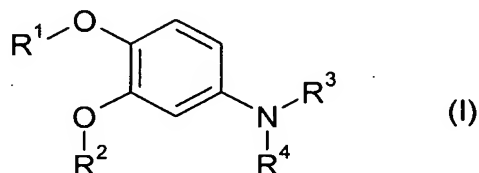
amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein R<sup>3</sup> and R<sup>4</sup> are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

17. (Withdrawn - Currently Amended): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to formula (I):



wherein

$R^1$  is H;

$R^2$  is alkyl having 1 to 12 carbon atoms which is branched or unbranched and which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano,  $C_{1-4}$ -alkoxy, oxo or combinations thereof, and wherein optionally one or more  $-CH_2CH_2-$  groups is replaced in each case by  $-CH=CH-$  or  $-C\equiv C-$  or  $-C/C-$ ,

cycloalkyl having 3 to 10 carbon atoms which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more

times by halogen, oxo, cyano, hydroxy, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, CF<sub>3</sub>, OCF<sub>3</sub>, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, cyano, or combinations thereof,

arylalkyl in which the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, which the arylalkyl radical is unsubstituted or is substituted in the aryl portion one or more times by halogen, CF<sub>3</sub>, OCF<sub>3</sub>, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, cyano, methylenedioxy, ethylenedioxy, or combinations thereof, and wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C≡C- ~~-C/C-~~, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof,

a partially unsaturated carbocyclic group having 5 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, hydroxy, nitro, cyano, oxo, or combinations thereof,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, OCF<sub>3</sub>, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C≡C- ~~-C/C-~~, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof;

R<sup>3</sup> is H,



alkyl having 1 to 8 carbon atoms, which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, cyano, C<sub>1-4</sub>-alkoxy, or combinations thereof,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion which is branched or unbranched has 1 to 5 carbon atoms, and which is unsubstituted or substituted in the carbocyclic portion one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof, and the alkyl portion is optionally substituted by halogen, C<sub>1-4</sub>-alkoxy, cyano or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl, or

heteroarylalkyl group, wherein the heteroaryl portion may be partially or fully saturated and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, the heteroarylalkyl group is unsubstituted or substituted

one or more times in the heteroaryl portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

R<sup>4</sup> is H,

cycloalkyl having 3 to 10 which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkenyl having 2 to 12 carbon atoms, alkynyl having 2 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, pyrrolyl, tetrazole-5-yl, 2-(heterocycle)tetrazole-5-yl ~~tetrazole-5-yl~~, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having

7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof;

R<sup>5</sup> is H,

alkyl having 1 to 8 carbon atoms, which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof,

alkylamino or dialkylamino wherein each alkyl portion has independently 1 to 8 carbon atoms,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion has 1 to 5 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof,

cycloalkyl having 3 to 10 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkoxy having 1 to 12 carbon atoms, alkyl having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms, which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms,

hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, cycloalkyl having 3 to 10 carbon atoms, aryl having 6 to 14 carbon atoms which is substituted unsubstituted, heteroaryl having one or two rings and a total number of 5 to 10 ring atoms wherein at least one of the ring atoms is a heteroatom and which is substituted unsubstituted, or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion which is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl

group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more -CH<sub>2</sub>- groups are each optionally replaced by -O-, -S-, -NR<sup>6</sup>-, -SO<sub>2</sub>NH-, -NHSO<sub>2</sub>-, -SO<sub>2</sub>NR<sup>6</sup>-, -NR<sup>6</sup>SO<sub>2</sub>-, -CO-, -NR<sup>6</sup>CO-, -CONR<sup>6</sup>-, -NHCONH-, -OCONH-, -NHCOO-, -SCONH-, -SCSNH-, or -NHCSNH-; and

R<sup>6</sup> is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

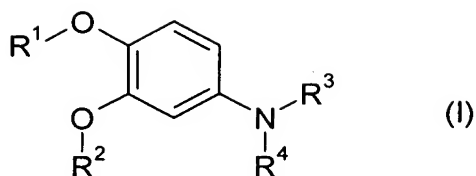
aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein  $R^3$  and  $R^4$  are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

18. (Withdrawn - Currently Amended): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to formula (I):





wherein

$R^1$  is H;

$R^2$  is alkyl having 1 to 12 carbon atoms which is branched or unbranched and which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano,  $C_{1-4}$ -alkoxy, oxo or combinations thereof, and wherein optionally one or more  $-CH_2CH_2-$  groups is replaced in each case by  $-CH=CH-$  or  $-C\equiv C-$  or  $-C/C-$ ,

cycloalkyl having 3 to 10 carbon atoms which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy,  $C_{1-4}$ -alkyl,  $C_{1-4}$ -alkoxy or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen,  $CF_3$ ,  $OCF_3$ , alkyl having 1 to 12 carbon atoms,

hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, cyano, or combinations thereof,

arylalkyl in which the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, which the arylalkyl radical is unsubstituted or is substituted in the aryl portion one or more times by halogen,  $\text{CF}_3$ ,  $\text{OCF}_3$ , alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, cyano, methylenedioxy, ethylenedioxy, or combinations thereof, and wherein in the alkyl portion one or more  $-\text{CH}_2\text{CH}_2-$  groups are each optionally replaced by  $-\text{CH}=\text{CH}-$  or  $-\text{C}\equiv\text{C}-$  or  $-\text{C}/\text{C}-$ , and one or more  $-\text{CH}_2-$  groups are each optionally replaced by  $-\text{O}-$  or  $-\text{NH}-$  and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof,

a partially unsaturated carbocyclic group having 5 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, hydroxy, nitro, cyano, oxo, or combinations thereof,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12

carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof,  
or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, OCF<sub>3</sub>, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C/C-, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof;

R<sup>3</sup> is H,

alkyl having 1 to 8 carbon atoms, which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, cyano, C<sub>1-4</sub>-alkoxy, or combinations thereof,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion which is branched or unbranched has 1 to 5 carbon atoms, and which is unsubstituted or

substituted in the carbocyclic portion one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof, and the alkyl portion is optionally substituted by halogen, C<sub>1-4</sub>-alkoxy, cyano or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl, or

heteroarylalkyl group, wherein the heteroaryl portion may be partially or fully saturated and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, the heteroarylalkyl group is unsubstituted or substituted one or more times in the heteroaryl portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

R<sup>4</sup> is H,

cycloalkyl having 3 to 10 which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkenyl having 2 to 12 carbon atoms, alkynyl having 2 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, pyrrolyl, tetrazole-5-yl, 2-(heterocycle)tetrazole-5-yl ~~tetrazole-5-yl~~, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by

halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof;

R<sup>5</sup> is H,

alkyl having 1 to 8 carbon atoms, which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof,

alkylamino or dialkylamino wherein each alkyl portion has independently 1 to 8 carbon atoms,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion has 1 to 5 carbon

atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof,

cycloalkyl having 3 to 10 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkoxy having 1 to 12 carbon atoms, alkyl having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms, which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio

having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, cycloalkyl having 3 to 10 carbon atoms, aryl having 6 to 14 carbon atoms which is substituted unsubstituted, heteroaryl having one or two rings and a total number of 5 to 10 ring atoms wherein at least one of the ring atoms is a heteroatom and which is substituted unsubstituted, or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1



to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion which is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more -CH<sub>2</sub>- groups are each optionally replaced by -O-, -S-, -NR<sup>6</sup>-, -SO<sub>2</sub>NH-, -NHSO<sub>2</sub>-, -SO<sub>2</sub>NR<sup>6</sup>-, -NR<sup>6</sup>SO<sub>2</sub>-, -CO-, -NR<sup>6</sup>CO-, -CONR<sup>6</sup>-, -NHCONH-, -OCONH-, -NHCOO-, -SCONH-, -SCSNH-, or -NHCSNH-; and

R<sup>6</sup> is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

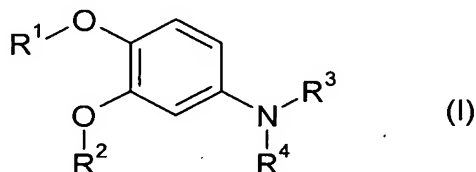
aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl

having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein  $R^3$  and  $R^4$  are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

19. (Withdrawn - Currently Amended): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to formula (I):



wherein

$R^1$  is H;

$R^2$  is alkyl having 1 to 12 carbon atoms which is branched or unbranched and which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano,  $C_{1-4}$ -alkoxy, oxo or combinations thereof, and wherein

optionally one or more  $\text{-CH}_2\text{CH}_2\text{-}$  groups is replaced in each case by  $\text{-CH=CH-}$  or  $\text{-}\underline{\text{C}\equiv\text{C}}\text{-}$   $\text{-C/C-}$ ,

cycloalkyl having 3 to 10 carbon atoms which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy,  $\text{C}_{1-4}$ -alkyl,  $\text{C}_{1-4}$ -alkoxy or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen,  $\text{CF}_3$ ,  $\text{OCF}_3$ , alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, cyano, or combinations thereof,

arylalkyl in which the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, which the arylalkyl radical is unsubstituted or is substituted in the aryl portion one or more times by halogen,  $\text{CF}_3$ ,  $\text{OCF}_3$ , alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, cyano, methylenedioxy, ethylenedioxy, or combinations thereof, and wherein in the alkyl portion one or more  $\text{-CH}_2\text{CH}_2\text{-}$  groups are each optionally

replaced by  $\text{-CH=CH-}$  or  $\text{-}\underline{\text{C}\equiv\text{C}}\text{-}$   $\text{-}\underline{\text{C}}/\underline{\text{C}}\text{-}$ , and one or more  $\text{-CH}_2\text{-}$  groups are each optionally replaced by  $\text{-O-}$  or  $\text{-NH-}$  and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof,

a partially unsaturated carbocyclic group having 5 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, hydroxy, nitro, cyano, oxo, or combinations thereof,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen,  $\text{OCF}_3$ , hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or

combinations thereof, wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C≡C- -C/C-, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof;

R<sup>3</sup> is H,

alkyl having 1 to 8 carbon atoms, which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, cyano, C<sub>1-4</sub>-alkoxy, or combinations thereof,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion which is branched or unbranched has 1 to 5 carbon atoms, and which is unsubstituted or substituted in the carbocyclic portion one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof, and the alkyl portion is optionally substituted by halogen, C<sub>1-4</sub>-alkoxy, cyano or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon

atoms, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl, or

heteroarylalkyl group, wherein the heteroaryl portion may be partially or fully saturated and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, the heteroarylalkyl group is unsubstituted or substituted one or more times in the heteroaryl portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

R<sup>4</sup> is H,

cycloalkyl having 3 to 10 which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkenyl having 2 to 12 carbon atoms, alkynyl having 2 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each

alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl,  $\text{OCF}_3$ , amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, pyrrolyl, tetrazole-5-yl, 2-(heterocycle)tetrazole-5-yl ~~tetrazole-5-yl~~, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms,  $\text{R}^5\text{-L-}$ , or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl,  $\text{OCF}_3$ , amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15



carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof;

R<sup>5</sup> is H,

alkyl having 1 to 8 carbon atoms, which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof,

alkylamino or dialkylamino wherein each alkyl portion has independently 1 to 8 carbon atoms,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion has 1 to 5 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof,

cycloalkyl having 3 to 10 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkoxy having 1 to 12 carbon atoms, alkyl having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms, which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, cycloalkyl having 3 to 10 carbon atoms, aryl having 6 to 14 carbon atoms which is substituted unsubstituted, heteroaryl having one or two rings and a total number of 5 to 10 ring atoms wherein at least one of the ring atoms is a heteroatom and which is substituted unsubstituted, or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion which is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more -CH<sub>2</sub>- groups are each optionally replaced by -O-, -S-, -NR<sup>6</sup>-, -SO<sub>2</sub>NH-, -NHSO<sub>2</sub>-, -SO<sub>2</sub>NR<sup>6</sup>-, -NR<sup>6</sup>SO<sub>2</sub>-, -CO-, -NR<sup>6</sup>CO-, -CONR<sup>6</sup>-, -NHCONH-, -OCONH-, -NHCOO-, -SCONH-, -SCSNH-, or -NHCSNH-; and

R<sup>6</sup> is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has

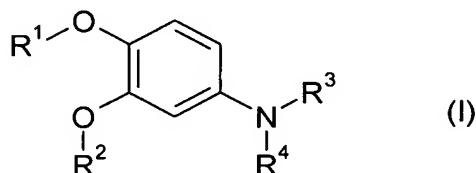
1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl,  $\text{CF}_3\text{O}$ , nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein  $\text{R}^3$  and  $\text{R}^4$  are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

20. (Withdrawn - Currently Amended): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to formula (I):



wherein

$R^1$  is H;

$R^2$  is alkyl having 1 to 12 carbon atoms which is branched or unbranched and which is unsubstituted or substituted one or more times by halogen, hydroxy, cyano,  $C_{1-4}$ -alkoxy, oxo or combinations thereof, and wherein optionally one or more  $-CH_2CH_2-$  groups is replaced in each case by  $-CH=CH-$  or  $-C\equiv C-$   $-C/C-$ ,

cycloalkyl having 3 to 10 carbon atoms which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more

times by halogen, oxo, cyano, hydroxy, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy or combinations thereof,

aryl having 6 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, CF<sub>3</sub>, OCF<sub>3</sub>, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, cyano, or combinations thereof,

arylalkyl in which the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, which the arylalkyl radical is unsubstituted or is substituted in the aryl portion one or more times by halogen, CF<sub>3</sub>, OCF<sub>3</sub>, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, nitro, cyano, methylenedioxy, ethylenedioxy, or combinations thereof, and wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C≡C- ~~-C/C-~~, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof,

a partially unsaturated carbocyclic group having 5 to 14 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, hydroxy, nitro, cyano, oxo, or combinations thereof,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, OCF<sub>3</sub>, hydroxy, aryl, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, nitro, oxo, or combinations thereof, wherein in the alkyl portion one or more -CH<sub>2</sub>CH<sub>2</sub>- groups are each optionally replaced by -CH=CH- or -C≡C- ~~-C/C-~~, and one or more -CH<sub>2</sub>- groups are each optionally replaced by -O- or -NH- and/or the alkyl portion is optionally substituted by halogen, oxo, hydroxy, cyano, or combinations thereof;

R<sup>3</sup> is H,



alkyl having 1 to 8 carbon atoms, which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, cyano, C<sub>1-4</sub>-alkoxy, or combinations thereof,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion which is branched or unbranched has 1 to 5 carbon atoms, and which is unsubstituted or substituted in the carbocyclic portion one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof, and the alkyl portion is optionally substituted by halogen, C<sub>1-4</sub>-alkoxy, cyano or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl, or

heteroarylalkyl group, wherein the heteroaryl portion may be partially or fully saturated and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, the heteroarylalkyl group is unsubstituted or substituted

one or more times in the heteroaryl portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino wherein the alkyl group has 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

R<sup>4</sup> is H,

cycloalkyl having 3 to 10 which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkyl having 1 to 4 carbon atoms, alkoxy having 1 to 4 carbon atoms, or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkenyl having 2 to 12 carbon atoms, alkynyl having 2 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, pyrrolyl, tetrazole-5-yl, 2-(heterocycle)tetrazole-5-yl ~~tetrazole-5-yl~~, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having

7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof, or

heteroaryl having 5 to 10 ring atoms in which at least 1 ring atom is a heteroatom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, OCF<sub>3</sub>, amino, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, trialkylsilyloxy wherein each alkyl group has 1 to 12 carbon atoms, R<sup>5</sup>-L-, or combinations thereof;

R<sup>5</sup> is H,

alkyl having 1 to 8 carbon atoms, which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof,

alkylamino or dialkylamino wherein each alkyl portion has independently 1 to 8 carbon atoms,

a partially unsaturated carbocycle-alkyl group wherein the carbocyclic portion has 5 to 14 carbon atoms and the alkyl portion has 1 to 5 carbon atoms, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, nitro, cyano, oxo, or combinations thereof,

cycloalkyl having 3 to 10 carbon atoms, which is unsubstituted or substituted one or more times by halogen, hydroxy, oxo, cyano, alkoxy having 1 to 12 carbon atoms, alkyl having 1 to 4 carbon atoms, or combinations thereof,

cycloalkylalkyl having 4 to 16 carbon atoms, which is unsubstituted or substituted in the cycloalkyl portion and/or the alkyl portion one or more times by halogen, oxo, cyano, hydroxy, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms or combinations thereof,

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms,

hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl'-O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, cycloalkyl having 3 to 10 carbon atoms, aryl having 6 to 14 carbon atoms which is substituted unsubstituted, heteroaryl having one or two rings and a total number of 5 to 10 ring atoms wherein at least one of the ring atoms is a heteroatom and which is substituted unsubstituted, or combinations thereof,

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms and/or substituted in the alkyl portion by halogen, cyano, or methyl,

a heterocyclic group, which is saturated, partially saturated or unsaturated, having 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, alkylsulfonyl having 1 to 12 carbon atoms, phenoxy, or combinations thereof, or

a heterocycle-alkyl group, wherein the heterocyclic portion is saturated, partially saturated or unsaturated, and has 5 to 10 ring atoms in which at least 1 ring atom is a N, O or S atom, and the alkyl portion which is branched or unbranched and has 1 to 5 carbon atoms, the heterocycle-alkyl group is unsubstituted or substituted one or more times in the heterocyclic portion by halogen, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, cyano, trifluoromethyl, CF<sub>3</sub>O, nitro, oxo, amino, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl

group has 1 to 12 carbon atoms, or combinations thereof and/or substituted in the alkyl portion by halogen, cyano, or methyl or combinations thereof;

L is a single bond or a divalent aliphatic radical having 1 to 8 carbon atoms wherein one or more -CH<sub>2</sub>- groups are each optionally replaced by -O-, -S-, -NR<sup>6</sup>-, -SO<sub>2</sub>NH-, -NHSO<sub>2</sub>-, -SO<sub>2</sub>NR<sup>6</sup>-, -NR<sup>6</sup>SO<sub>2</sub>-, -CO-, -NR<sup>6</sup>CO-, -CONR<sup>6</sup>-, -NHCONH-, -OCONH-, -NHCOO-, -SCONH-, -SCSNH-, or -NHCSNH-; and

R<sup>6</sup> is H,

alkyl having 1 to 8 which is branched or unbranched and which is unsubstituted or substituted one or more times with halogen, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, oxo, or combinations thereof;

arylalkyl having 7 to 19 carbon atoms, wherein the aryl portion has 6 to 14 carbon atoms and the alkyl portion, which is branched or unbranched, has 1 to 5 carbon atoms, arylalkyl radical is unsubstituted or substituted, in the aryl portion, one or more times by halogen, trifluoromethyl, CF<sub>3</sub>O, nitro, amino, alkyl having 1 to 12 carbon atoms, alkoxy having 1 to 12 carbon atoms, alkylamino having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, and/or substituted in the alkyl portion by halogen, cyano, or methyl;

aryl having 6 to 14 carbon atoms and which is unsubstituted or substituted one or more times by halogen, alkyl having 1 to 12 carbon atoms, hydroxy, alkoxy having 1 to 12 carbon atoms, alkoxyalkoxy wherein each alkoxy group has 1 to 12 carbon atoms, nitro, methylenedioxy, ethylenedioxy, trifluoromethyl, amino, aminomethyl, aminoalkyl having 1 to 12 carbon atoms, aminoalkoxy having 1 to 12 carbon atoms, dialkylamino wherein each alkyl group has 1 to 12 carbon atoms, hydroxyalkyl having 1 to 12 carbon atoms, hydroxamic acid, tetrazole-5-yl, hydroxyalkoxy having 1 to 12 carbon atoms, carboxy, alkyl -O-CO- wherein the alkyl portion has 1 to 12 carbon atoms, cyano, alkanoyl having 1 to 13 carbon atoms, aroyl having 7 to 15 carbon atoms, alkylthio having 1 to 12 carbon atoms, alkylsulfinyl having 1 to 12 carbon atoms, or alkylsulfonyl having 1 to 12 carbon atoms,

wherein  $R^3$  and  $R^4$  are not simultaneously both H; and

pharmaceutically acceptable salts thereof.

21. (Cancelled):

22. (Cancelled):



23. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 2.

24. (Withdrawn): A method according to claim 23, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

25. (Withdrawn): A method according to claim 23, wherein said patient is a human.

26. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 2.

27. (Withdrawn): A method according to claim 26, wherein said patient is a human.

28. (Withdrawn): A method according to claim 27, wherein said patient is suffering from memory impairment.

29. (Withdrawn): A method according to claim 28, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

30. (Withdrawn; Currently Amended): A method according to claim 28, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

31. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 2.

32. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 2.

33. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 2.

34. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 2.

35. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 2.

36. (Original): A pharmaceutical composition comprising a compound according to claim 2 and a pharmaceutically acceptable carrier.

37. (Original): A composition according to claim 36, wherein said composition contains 0.1-50 mg of said compound.

38. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 3.

39. (Withdrawn): A method according to claim 38, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

40. (Withdrawn): A method according to claim 38, wherein said patient is a human.

41. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 3.

42. (Withdrawn): A method according to claim 41, wherein said patient is a human.

43. (Withdrawn): A method according to claim 42, wherein said patient is suffering from memory impairment.

44. (Withdrawn): A method according to claim 41, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

45. (Withdrawn; Currently Amended): A method according to claim 43, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

46. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 3.

47. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 3.

48. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 3.

49. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 3.

50. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 3.

51. (Original): A pharmaceutical composition comprising a compound according to claim 3 and a pharmaceutically acceptable carrier.

52. (Original): A composition according to claim 51, wherein said composition contains 0.1-50 mg of said compound.

53. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 4.

54. (Withdrawn): A method according to claim 53, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

55. (Withdrawn): A method according to claim 53, wherein said patient is a human.

56. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 4.

57. (Withdrawn): A method according to claim 56, wherein said patient is a human.

58. (Withdrawn): A method according to claim 57, wherein said patient is suffering from memory impairment.

59. (Withdrawn): A method according to claim 56, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

60. (Withdrawn; Currently Amended): A method according to claim 58, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

61. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 4.

62. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 4.

63. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 4.

64. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 4.

65. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 4.

66. (Original): A pharmaceutical composition comprising a compound according to claim 4 and a pharmaceutically acceptable carrier.

67. (Original): A composition according to claim 66, wherein said composition contains 0.1-50 mg of said compound.

68. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 5.

69. (Withdrawn): A method according to claim 68, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

70. (Withdrawn): A method according to claim 68, wherein said patient is a human.



71. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 5.

72. (Withdrawn): A method according to claim 71, wherein said patient is a human.

73. (Withdrawn): A method according to claim 72, wherein said patient is suffering from memory impairment.

74. (Withdrawn): A method according to claim 71, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

75. (Withdrawn; Currently Amended): A method according to claim 73, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

76. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 5.

77. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 5.

78. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 5.

79. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 5.

80. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 5.

81. (Original): A pharmaceutical composition comprising a compound according to claim 5 and a pharmaceutically acceptable carrier.

82. (Original): A composition according to claim 81, wherein said composition contains 0.1-50 mg of said compound.

83. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 6.

84. (Withdrawn): A method according to claim 83, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

85. (Withdrawn): A method according to claim 83, wherein said patient is a human.

86. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 6.

87. (Withdrawn): A method according to claim 86, wherein said patient is a human.

88. (Withdrawn): A method according to claim 87, wherein said patient is suffering from memory impairment.

89. (Withdrawn): A method according to claim 86, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

90. (Withdrawn; Currently Amended): A method according to claim 89, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

91. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 6.

92. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 6.

93. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 6.

94. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 6.

95. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 6.

96. (Original): A pharmaceutical composition comprising a compound according to claim 6 and a pharmaceutically acceptable carrier.

97. (Original): A composition according to claim 96, wherein said composition contains 0.1-50 mg of said compound.

98. (Withdrawn): A method for enhancing cognition in a patient in whom such enhancement is desired comprising administering to said patient an effective amount of a compound according to claim 7.

99. (Withdrawn): A method according to claim 98, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

100. (Withdrawn): A method according to claim 98, wherein said patient is a human.

101. (Withdrawn): A method of treating a patient suffering from cognition impairment or decline comprising administering to said patient an effective amount of a compound according to claim 7.

102. (Withdrawn): A method according to claim 101, wherein said patient is a human.

103. (Withdrawn): A method according to claim 102, wherein said patient is suffering from memory impairment.

104. (Withdrawn): A method according to claim 101, wherein said compound is administered in an amount of 0.01-100 mg/kg of body weight/day.

105. (Withdrawn; Currently Amended): A method according to claim 103, wherein said patient is suffering from memory impairment due to Alzheimer's disease, schizophrenia, Parkinson's disease, Huntington's disease, Pick's disease, Creutzfeldt-Jakob ~~Creutzfeld-Jakob~~ disease, depression, aging, head trauma, stroke, CNS hypoxia, cerebral senility, multiinfarct dementia, HIV or cardiovascular disease.

106. (Withdrawn): A method for treating a patient having a disease involving decreased cAMP levels comprising administering to said patient an effective amount of a compound according to claim 7.

107. (Withdrawn): A method of inhibiting PDE4 enzyme activity in a patient comprising administering to said patient an effective amount of a compound according to claim 7.

108. (Withdrawn): A method of treating a patient suffering from memory impairment due to a neurodegenerative disease comprising administering to said patient an effective amount of a compound according to claim 7.

109. (Withdrawn): A method of treating a patient suffering from memory impairment due to an acute neurodegenerative disorder comprising administering to said patient an effective amount of a compound according to claim 7.

110. (Withdrawn): A method of treating a patient suffering from an allergic or inflammatory disease comprising administering to said patient an effective amount of a compound according to claim 7.

111. (Original): A pharmaceutical composition comprising a compound according to claim 7 and a pharmaceutically acceptable carrier.

112. (Original): A composition according to claim 111, wherein said composition contains 0.1-50 mg of said compound.

113. (Original): An intermediate compound which is N-(3-hydroxy-4-methoxyphenyl)-N-(3-pyridylmethyl)-3-aminobenzoic acid.



## REMARKS

### Amendments

Claims 2-6, 8, 11, 16-20, 45, 60, 75, 90, and 105 are amended to correct minor typographical errors. These amendments do not impact the scope of the claimed invention, nor do they raise new issues requiring further search and/or consideration. Entry of the amendments is respectfully requested.

### Withdrawal of all Rejections

Applicants gratefully acknowledge the Examiner's indication that all claim rejections have been withdrawn.

### Request for Withdrawal of Restriction and Finality of Office Action

The only remaining issue concerns the inclusion of non-elected subject matter within the scope of claims 2-7, 36, 37, 51, 52, 66, 67, 81, 82, 96 and 97. Applicants respectfully request that the Finality of the Office Action be withdrawn and that examination proceed in accordance with MPEP §803.02. Applicants are simultaneously herewith filing a Petition requesting the Group Director to withdraw the Restriction. The following comments address specific points raised by the Examiner in the January 16, 2007 Office Action.

The Examiner argues that the Restriction was made under 35 USC §121 which gives the Commissioner authority to limit examination of an application where two or more independent and distinct inventions are claimed. However, it is clear from the case law, such as *In re Weber*, 580 F.2d 455, 198 USPQ 328 (CCPA 1978) and *In re Haas*, 580 F.2d 461, 198 USPQ 334 (CCPA 1978), that 35 USC 121 **does not permit restriction within a single claim unless the subject matter in a claim lacks unity of invention.** Moreover, the MPEP is completely consistent with applicants' position. See MPEP §803.02

The Examiner further argues that Restriction here is predicated on the alleged "fact" that the claimed subject matter contains independent and distinct inventions, and

that applicants did not submit arguments to the contrary. Applicants disagree. It is clear that to make a Restriction, the burden is on the PTO to set forth a rationale as to why the claimed subject matter contains independent and distinct inventions. The MPEP, in conjunction with the case law, clearly sets forth rationale as to what must be shown to support a Restriction within a single Markush claim. Here again, see MPEP §803.02. To support a Restriction in such a case, the PTO must show that the Markush grouping is improper. No such showing has been made, and, as acknowledged in the Office Action, no improper Markush rejection has been made.

Moreover, this issue has already been effectively the subject of a Petition **granted** by the Group Director. As discussed in the prior Reply, a Restriction was made in related application Serial No. 10/361,634 (one of the references used in the instant application as a basis for a rejection under 35 USC 102(e)). **Structural Formula (I) in claim 1 of '634 is the same as structural Formula (I), the difference being in the definitions of the variable groups.** Thus, the core structure in the claims of the instant application is the same as the core structure in '634.

The Examiner in Serial No. '634 similarly sought to impose a restriction within a single claim. The Restriction ultimately resulted in the applicants filing a Petition which was granted by the Group Director.

In the Petition Decision, the Group Director refuted the position taken by the Examiner and stated that examination should proceed in accordance with MPEP §803.02, as argued by the applicants.

While the examiner states that the "restriction" requirement is supported by the burden placed on the Office of examining the large Markush group, **such reasoning is improper under M.P.E.P. 803.02.**

A review of claim 1 shows that a substituted benzene ring is claimed. The substituents are two alkoxy groups ortho to each other and an amino group para to one of the alkoxy groups. The four radicals of the three groups are generally alkyl or cyclic alkyl groups, but may involve additional substitution. **However, the various species evidence a common core (the substituted benzene ring) and are alleged to have a utility associated with the core structure thus satisfying the criteria set forth in M.P.E.P. 803.02 for making an election of species requirement. When such a requirement is made, the guidelines of M.P.E.P. 803.02 are required to be followed. Creation of a subgenus based on the elected species is not permitted.** In view of the above, the restriction between original Groups I and II is deemed to be an election of species

requirement and the examiner's requirement to limit the claims to a subgenus determined by the examiner is withdrawn. (emphasis added)


The Group Director's decision then instructed the Examiner to follow the guidelines of MPEP 803.02 in examining the application.

In the Office Action of January 16, 2007, the Examiner acknowledges that applicants directed her attention to this prior Petition Decision. But, the Examiner never refutes the Group Director's reasoning in granting the prior Petition Decision. No rationale is provided as to why the Restriction is being maintained in the instant application when it is clearly contrary to the holding and logic of the prior Petition Decision. No explanation is given in the Office Action as to why MPEP §803.02 is being ignored, when the prior Petition Decision stated that the guidelines of MPEP §803.02 must be followed.

In view of the above remarks, applicants again request that the Finality of the Office Action be withdrawn and that examination proceed in accordance with MPEP §803.02.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
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Date: April 2, 2007